

What is claimed is:

1. A method for minimally invasive sacral stimulation lead implantation in a patient, comprising:

inserting a needle posterior to the sacrum through an entry point;

guiding the needle into a foramen along an insertion path to a desired location;

dilating the insertion path with a dilator to a diameter sufficient for inserting a stimulation lead;

removing the needle from the insertion path;

inserting the stimulation lead to the desired location; and,

removing the dilator from the insertion path.
2. The method as in claim 1 further comprising,

creating an incision through the entry point from an epidermis to a fascia layer;

anchoring the stimulation lead to the fascia layer; and,

closing the incision.
3. The method as in claim 1 further comprising applying anesthetic to the patient.
4. The method as in claim 3 wherein the anesthetic is selected from the group consisting of local anesthetic, and general anesthetic.
5. The method as in claim 1 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.
6. The method as in claim 1 further comprising inserting a guide wire through the needle to the desired location.
7. The method as in claim 1 wherein the stimulation lead is inserted into a foramen.

8. The method as in claim 1 wherein the stimulation lead is implanted to treat pelvic floor disorders.
9. The method as in claim 8 wherein the pelvic floor disorder are selected from the group consisting of urinary control disorders, fecal control disorders, sexual dysfunction, and pelvic pain.
10. The method as in claim 1 wherein the needle is selected from the group consisting of a needle without a hub, a needle with a hub, a solid rod with a sharp tip, and a foramen needle modified to have an extended length.
11. The method as in claim 1 wherein the needle size is in the range from about 26 gauge to about 12 gauge.
12. The method as in claim 1 wherein the dilator size is in the range from about 5 French to about 12 French.
13. The method as in claim 1 wherein anchoring is accomplished with an anchor selected from the group consisting of a suture anchor and a twist-lock suture anchor.
14. A method for minimally invasive sacral stimulation lead placement in a patient, comprising:

inserting a needle posterior to the sacrum through an entry point;

guiding the needle into a foramen along an insertion path to a desired location;

dilating the insertion path with a dilator to a diameter sufficient for inserting a stimulation lead;

removing the needle from the insertion path;

inserting the stimulation lead to the desired location;

removing the dilator from the insertion path; and,

validating that the stimulation lead is placed in the desired position.

15. The method as in claim 14 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.
16. The method as in claim 14 wherein the stimulation lead is inserted into a foramen.
17. A method for minimally invasive sacral stimulation lead implantation in a patient, comprising:
 - inserting a needle posterior to the sacrum through an entry point;
 - guiding the needle into a foramen along an insertion path to a desired location;
 - creating an incision through the entry point from an epidermis to a fascia layer;
 - dilating the insertion path with a dilator using the needle as a guide to a diameter sufficient for inserting a stimulation lead;
 - removing the needle from the insertion path;
 - inserting the stimulation lead to the desired location;
 - removing the dilator from the insertion path;
 - anchoring the stimulation lead to the fascia layer; and,
 - closing the incision.
18. The method as in claim 17 further comprising applying a local anesthetic posterior to the sacrum.
19. The method as in claim 17 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.

20. The method as in claim 17 further comprising inserting a guide wire through the needle to the desired location.
21. The method as in claim 17 wherein the stimulation lead is inserted into a foramen.
22. The method as in claim 17 wherein the stimulation lead is implanted to treat pelvic floor disorders.
23. The method as in claim 22 wherein the pelvic floor disorder are selected from the group consisting of urinary control disorders, fecal control disorders, sexual dysfunction, and pelvic pain.
24. The method as in claim 17 wherein the needle size is in the range from about 26 gauge to about 12 gauge.
25. The method as in claim 17 wherein the dilator size is in the range from about 5 French to about 12 French.
26. The method as in claim 17 wherein anchoring is accomplished with an anchor selected from the group consisting of a suture anchor and a twist-lock suture anchor.
27. A method for minimally invasive sacral stimulation lead placement in a patient, comprising:
- inserting a needle posterior to the sacrum through an entry point;
- guiding the needle into a foramen along an insertion path to a desired location;
- creating an incision through the entry point from an epidermis to a fascia layer;
- dilating the insertion path with a dilator using the needle as a guide to a diameter sufficient for inserting a stimulation lead;
- removing the needle from the insertion path;
- inserting the stimulation lead to the desired location;

removing the dilator from the insertion path; and,

validating that the stimulation lead is placed in the desired position.

28. The method as in claim 27 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.

29. The method as in claim 27 wherein the stimulation lead is inserted into a foramen.

30. A method for minimally invasive sacral stimulation lead implantation in a patient, comprising:

inserting a needle posterior to the sacrum through an entry point;

guiding the needle into a foramen along a insertion path to a desired location;

inserting a guide wire into the needle to the desired location;

removing the needle while retaining the guide wire at the desired location;

dilating the insertion path with a dilator placed over the guide wire along the insertion path to a diameter sufficient for inserting a stimulation lead;

removing the guide wire from the dilator;

inserting the stimulation lead through the dilator to the desired location; and,

removing the dilator from the insertion path.

31. The method as in claim 30 further comprising,

creating an incision through the entry point from an epidermis to a fascia layer;

anchoring the stimulation lead to the fascia layer; and,

closing the incision.

32. The method as in claim 30 further comprising applying anesthetic to the patient.

33. The method as in claim 32 wherein the anesthetic is selected from the group consisting of local anesthetic, and general anesthetic.
34. The method as in claim 30 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.
35. The method as in claim 30 further comprising inserting a guide wire through the needle to the desired location.
36. The method as in claim 30 wherein the stimulation lead is inserted into a foramen.
37. The method as in claim 30 wherein the stimulation lead is implanted to treat pelvic floor disorders.
38. The method as in claim 37 wherein the pelvic floor disorder are selected from the group consisting of urinary control disorders, fecal control disorders, sexual dysfunction, and pelvic pain.
39. The method as in claim 30 wherein the needle size is in the range from about 26 gauge to about 12 gauge.
40. The method as in claim 30 wherein the dilator size is in the range from about 5 French to about 12 French.
41. The method as in claim 30 wherein anchoring is accomplished with an anchor selected from the group consisting of a suture anchor and a twist-lock suture anchor.
42. A method for minimally invasive sacral stimulation lead placement in a patient, comprising:
inserting a needle posterior to the sacrum through an entry point;
guiding the needle into a foramen to along an insertion path to a desired location;

inserting a guide wire into the needle to the desired location;
removing the needle while retaining the guide wire at the desired location;
dilating the insertion path with a dilator placed over the guide wire along the insertion path to a diameter sufficient for inserting a stimulation lead;
removing the guide wire from the dilator;
inserting the stimulation lead through the dilator to the desired location; and,
removing the dilator from the insertion path.

43. The method as in claim 42 further comprising validating that the electrical stimulation lead is placed in the desired position.
44. The method as in claim 42 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.
45. The method as in claim 42 wherein the stimulation lead is inserted into a foramen.
46. A method for minimally invasive sacral stimulation lead implantation in a patient, comprising:
inserting a needle posterior to the sacrum through an entry point;
guiding the needle into a foramen to along an insertion path to a desired location;
creating an incision through the entry point from an epidermis to a fascia layer;
inserting a guide wire into the needle;
removing the needle from the insertion path;
inserting the stimulation lead over the guide wire to the desired location;
removing the guide wire from the stimulation lead;
anchoring the stimulation lead to the fascia layer; and,

closing the incision.

47. The method as in claim 46 further comprising applying a local anesthetic posterior to the sacrum.
48. The method as in claim 46 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.
49. The method as in claim 46 wherein the stimulation lead is inserted into a foramen.
50. The method as in claim 46 wherein the stimulation lead is implanted to treat pelvic floor disorders.
51. The method as in claim 50 wherein the pelvic floor disorder are selected from the group consisting of urinary control disorders, fecal control disorders, sexual dysfunction, and pelvic pain.
52. The method as in claim 46 wherein the needle size is in the range from about 26 gauge to about 12 gauge.
53. The method as in claim 46 wherein the dilator size is in the range from about 5 French to about 12 French.
54. The method as in claim 46 wherein anchoring is accomplished with an anchor selected from the group consisting of a suture anchor and a twist-lock suture anchor.
55. A method for minimally invasive sacral stimulation lead placement in a patient, comprising:

inserting a needle posterior to the sacrum through an entry point;

guiding the needle into a foramen along an insertion path to a desired location;

creating an incision through the entry point from an epidermis to a fascia layer;

inserting a guide wire into the needle;

removing the needle from the insertion path;

inserting the stimulation lead over the guide wire to the desired location;

removing the guide wire from the stimulation lead; and,

validating that the stimulation lead is placed in the desired location.

56. The method as in claim 55 further comprising sensing a needle position in the patient by applying an electrical signal to the needle to evoke a patient response related to the needle position.
57. The method as in claim 55 wherein the stimulation lead is inserted into a foramen.